



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of )  
Shinji TAKEDA et al. ) Atty. Docket No.: TM&K000710  
Serial No. 09/785,436 ) Group Art Unit: 2829  
Filed: February 20, 2001 ) Examiner: Scott Geyer  
For: SEMICONDUCTOR DEVICE AND ) July 9, 2003  
PROCESS FOR FABRICATION )  
THEREOF )

2829  
#24  
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**SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT**

Assistant Commissioner for Patents  
Washington, D.C. 20231

Sir:

This is a Supplemental Information Disclosure Statement with regard to the above-identified application. Copies of each of the documents listed in the attached Form PTO/SB/08B are attached.

In addition, the Examiner is advised that the following are related to the above-captioned application: U.S. Patent No. 6,099,678 and U.S. Patent Application Serial Nos. 08/981,702, 09/543,247, 09/616,943, 09/785,194, 09/785,486, and 10/428,126.

Documents C, F, H, I, J, P, Q, S, Z, AA, AC, and AE were cited in the Office Action dated January 4, 1999 (copy attached) in applicants' corresponding Application 08/875,330 (now U.S. Patent 6,099,678). Document C relates to die attach pickup tools. Document F relates to a taping apparatus for a lead frame. Document H relates to a method for combining die attach and lead bond in the assembly of a semiconductor package. Document I relates to a method for attaching a semiconductor die to a leadframe using a thermoplastic covered carrier tape. Document J relates to thermoplastic film die attach adhesives. Document P relates to a multi-chip electronic package module utilizing an adhesive sheet. Document Q relates to an

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apparatus for tape-mounting a semiconductor device. Document S relates to an adhesive tape for electronic parts and liquid adhesive. Document Z relates to a lead-on-chip integrated circuit apparatus. Document AA relates to a method for sticking an insulating film to a lead frame. Document AC relates to a semiconductor device. Document AE relates to an insulating film with improved punching characteristics and lead frame using the same.

Documents K, O, R, AB, AD, AF, AH, AJ, AK, and BB were cited in the Office Action dated June 6, 2002 (copy attached) in applicants' corresponding Application 09/543,247. Document K relates to an electrical laminate with dibasic acid-modified epoxy (meth)acrylate. Document O relates to an epoxy resin molding material for sealing of electronic components. Document R relates to a thermosetting resin composition, cured resin product, prepreg and fiber-reinforced plastic. Document AB relates to an epoxy resin composition. Document AD relates to a naphthalene and or biphenyl skeleton containing epoxy resin composition. Document AF relates to a process for fabricating a crack resistant resin encapsulated semiconductor chip package. Document AH relates to a process for fabricating a crack resistant resin encapsulated semiconductor chip package. Document AJ relates to a process for fabricating a crack resistant resin encapsulated semiconductor chip package. Document AK relates to a heat-resistant adhesive sheet. Document BB relates to an electrically conductive resin paste.

Documents A, G, AG, and AI were cited in the Office Action dated December 24, 2002 (copy attached) in applicants' corresponding Application 09/785,194. Document A relates to high temperature polyamide film laminates and process for preparation thereof. Document G relates to a method for producing carbon fiber-reinforced gypsum models and

forming molds. Document AG relates to a semiconductor plastic package, metal plate for said package, and method of producing copper-clad board for said package. Document AI relates to a method of fabricating a semiconductor device.

Document M was cited in the Office Action dated December 26, 2001 (copy attached) in applicants' corresponding Application 09/785,194. Document M relates to adhesive tapes.

Documents E, N, and AL were cited in the Office Action dated December 19, 2001 (copy attached) in applicants' corresponding Application 09/785,486. Document E relates to curable resin compositions. Document N relates to thermocurable compositions. Document AL relates to a soluble polyimide-siloxane precursor, process for producing same, and cross-linked polyimide-siloxane.

Document T was cited in a European Search Report dated March 24, 2003 (document BK) in applicants' corresponding European Application 03001585.3. Document T relates to resins of low thermal expansivity.

Documents AR and AS were cited in a corresponding International Application PCT/JP95/02691 in an International Search Report mailed April 2, 1996 (document BL). Document AR relates to a compression bonding device of metal foils and pieces. Document AS relates to a friction press welding method for aluminum alloy and carbon steel.

The relevance of documents cited in office actions and search reports of corresponding applications is clear from the office actions and search reports respectively.

Documents D, U, V, Y, AU, AV, AX, AZ, BA, and BC were cited in a corresponding Japanese Opposition for Japanese Patent No. 3215014, document BF. Document D is the U.S. counterpart of JP-64-19735, cited in corresponding Japanese Opposition for Japanese

Patent No. 3215014. Document U relates to a semiconductor device and its manufacture. Document V relates to a molding method. Document Y relates to a chip holder solder device. Document AU relates to the manufacture of a semiconductor package. Document AV relates to the manufacture of a submounting member. Document AX relates to equipment and method for attaching bonding tape. Document AZ relates to an adhesive tape for die bonding. Document BA relates to adhesive tape. Document BC relates to types of rubber and their chemical structure and properties. The relevance of these documents is clear from document BF.

Documents B, L, W, AM, AN, AO, AP, AQ, AT, AW, and AY were cited in a corresponding Japanese Application 2000-346979 in the Notice of Reason for Refusal mailed on October 22, 2002, document BD. Document B relates to a tape applying device. Document L relates to semiconductor encapsulating epoxy resin compositions and semiconductor devices. Document W relates to a semiconductor device and its manufacture. Document AM relates to an apparatus for attaching film. Document AN relates to a heat-resistant adhesive material and its application method. Document AO relates to a hot melt bonding electrically conductive filmy adhesive. Document AP relates to a tab pasting method and device thereof. Document AQ relates to an epoxy resin composition for sealing semiconductors and semiconductor devices. Document AT relates to a bonding method for pellets. Document AW relates to a tape adhering device. Document AY relates to a method of manufacturing an adhesive film. The relevance of these documents is clear from document BD.

Document X was cited in a corresponding Japanese Application 7-173493 in the

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Notice of Reason for Refusal mailed on August 29, 2000, document BG. Document X relates to a film applying method. The relevance of this document is clear from document BG.

Document BJ was cited in an Opposition (document BI) raised against corresponding Japanese Patent 3117966. Document BJ relates to a plastic reader. The relevance of this document is clear from document BI.

Document BE is an opposition raised against corresponding Japanese Patent 3187400.

Document BH is a Notice of Reason for Refusal for corresponding Japanese Appln. No. 2000-156125, mailed on September 19, 2000. Document BM is a European Search Report dated October 28, 1998 in corresponding European Application EP96922225. Document BN is a European Search Report dated July 15, 2002 in a corresponding European application.

It is respectfully requested that the attached documents be considered and officially cited, and that a copy of the Form PTO/SB/08B, initialed by the Examiner to indicate that the documents have been considered, be returned to the applicants.

This information disclosure statement is being filed with the check covering the government fee of \$180.00. The Commissioner is hereby authorized to charge any fee deficiency or any additional fees which may be further required in this application, or credit any

Serial No. 09/785,436

overpayment to Deposit Account No. 501281, under an order number which corresponds to the above attorney docket number.

Respectfully submitted,

GRIFFIN & SZIPL, P.C.

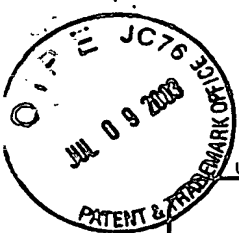


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**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

Sheet 1 of 6

**Complete if Known**

Application Number	09/785,436
Filing Date	February 20, 2001
First Named Inventor	Shinji TAKEDA
Art Unit	
Examiner Name	GEYER, Scott
Attorney Docket Number	TM&K0007

U. S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. <sup>1</sup>	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code <sup>2</sup> (if known)			
	A	US- 4,543,295	09-24-1985	St. Clair et al.	
	B	US- 4,581,096	04-08-1986	Sato	
	C	US- 4,875,279	10-24-1989	Sakiadis	
	D	US- 4,933,219	06-12-1990	Sakumoto et al.	
	E	US- 4,965,331	10-23-1990	Jackson et al.	
	F	US- 4,985,105	01-15-1991	Masuda	
	G	US- 4,990,292	02-05-1991	Hattori et al.	
	H	US- 5,145,099	09-08-1992	Wood et al.	
	I	US- 5,177,032	01-05-1993	Fogal et al.	
	J	US- 5,204,399	04-20-1993	Edelman	
	K	US- 5,238,730	08-24-1993	Hanawa et al.	
	L	US- 5,250,637	10-05-1993	Shiobara et al.	
	M	US- 5,277,972	01-11-1994	Sakumoto et al.	
	N	US- 5,296,567	03-22-1994	Baumann et al.	
	O	US- 5,319,005	06-07-1994	Hagiwara et al.	
	P	US- 5,360,942	11-01-1994	Hoffman et al.	
	Q	US- 5,432,380	07-11-1995	Jin et al.	
	R	US- 5,476,908	12-19-1995	Kishi et al.	
	S	US- 5,512,628	04-30-1996	Sakumoto et al.	

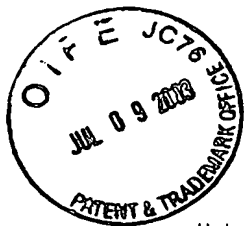
FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document	Publication Date	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages Or Relevant Figures Appear	T <sup>6</sup>
		Country Code <sup>3</sup> -Number <sup>4</sup> -Kind Code <sup>5</sup> (if known)	MM-DD-YYYY			
	T	EP-0271736-A1	06-22-1988	Nippon Steel Chemical		
	U	EP-0837498-A1	04-22-1998	Hitachi Chemica		
	V	JP-3215014	09-20-1991	Seiko Instr.		
	W	JP-02-256251	10-17-1990	MATSUSHITA		
	X	JP-06-326240	11-25-1994	Hitachi Cable		
	Y	JP-1-165635	11-20-1989	NEC Corp		

Examiner Signature	Date Considered
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\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. <sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, Washington, DC 20231.

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**INFORMATION DISCLOSURE  
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Sheet 2 of 6**Complete if Known**

Application Number	09/785,436
Filing Date	February 20, 2001
First Named Inventor	Shinji TAKEDA
Art Unit	
Examiner Name	GEYER, Scott
Attorney Docket Number	TM&K0007

**U. S. PATENT DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code <sup>2</sup> (if known)			
	Z	US- 5,528,075	06-18-1996	Burns	
	AA	US- 5,635,009	06-03-1997	Kawamura et al.	
	AB	US- 5,659,004	08-19-1997	Takigawa et al.	
	AC	US- 5,793,099	04-14-1998	Murakami et al.	
	AD	US- 5,827,908	10-27-1998	Arai et al.	
	AE	US- 5,837,368	11-17-1998	Hiroe et al.	
	AF	US- 6,046,072	04-04-2000	Matsuura et al.	
	AG	US- 6,097,089	08-01-2000	Gaku et al.	
	AH	US- 6,248,613	06-19-2001	Matsuura et al.	
	AI	US- 6,299,513	10-09-2001	Tsuihiji et al.	
	AJ	US- 6,372,080	04-16-2002	Matsuura et al.	
	AK	US- 2001/0015484-A1	08-23-2001	Matsuura et al.	
	AL	US- 4,656,238	04-07-1987	Kunimune et al.	
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**FOREIGN PATENT DOCUMENTS**

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		Country Code <sup>3</sup> Number <sup>4</sup> Kind Code <sup>5</sup> (if known)				
	AM	JP-3-228	01-07-1991	HITACHI CABLE		
	AN	JP-5-335379	12-17-1993	TORAY IND INC		
	AO	JP-5-125337	05-21-1993	SUMITOMO BAKELI		
	AP	JP-5-152386	06-18-1993	SUMITOMO METAL		
	AQ	JP-5-152466	06-18-1993	SHIN ETSU CHEM		

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SignatureDate  
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<b>Attorney Docket Number</b>	TM&K0007	

Sheet	5	of	6
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**NON PATENT LITERATURE DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
	BC	"Rubber Elastomer Utility Notes", relates to types of rubber and their chemical structure and properties, July 20, 1991	
	BD	Notice of Reason for Refusal for Japanese Appln. No. 2000-346979 mailed on 10/22/2002 together with English Translation	✓
	BE	Opposition against Japanese Patent No. 3187400	
	BF	Opposition against Japanese Patent No. 3215014	
	BG	Notice of Reason for Refusal Japanese for Appln. No. 7-173493 mailed on August 29, 2000 together with English Translation	✓
	BH	Notice of Reason for Refusal for Japanese Appln. No. 2000-156125 mailed on September 19, 2000 (with English Translation)	
	BI	Opposition against Japanese Patent No. 3117966 ✓	
	BJ	Property list, Plastic Reader (1987 15th edition)	
	BK	European Search Report dated March 24, 2003 (mailed March 31, 2003) for European application 03001585.3	
	BL	International Search Report mailed April 2, 1996 for International Application PCT/JP95/02691	

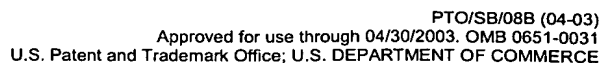
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<b>First Named Inventor</b>	Shinji TAKEDA
<b>Art Unit</b>	
<b>Examiner Name</b>	GEYER, Scott
<b>Attorney Docket Number</b>	TM&K0007

Sheet	6	of	6
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## NON PATENT LITERATURE DOCUMENTS

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